

Chemical Division
P.O. Box 2141
Texas City, Texas 77590
Telephone (713) 945-3411

150000/5
August 1, 1973



Mr. A. W. Busch
Regional Administrator, Region VI
Environmental Protection Agency
1600 Patterson Street
Dallas, TX 75204

Dear Mr. Busch:

GAF Corporation submits this application for a permit to dispose of waste in the Gulf of Mexico starting November 1, 1973 for a period of one year. GAF is presently disposing of the waste in an EPA designated area in the Gulf of Mexico pursuant to Permit No. 730D007 which expires November 1, 1973.

APPLICANT

GAF Corporation, P. O. Box 2141, Texas City, Texas,
F. E. Wetherill, Plant Manager. Carbon Copies:
GAF Corporation, F. Inzerillo, Corporate Environ-
mental Engineering, P. O. Box 12, Linden, New Jersey
07036

TRANSPORTATION

Port Arthur Towing Company, P. O. Box 1408, Port Arthur, Texas will furnish transportation to the dump site and will carry out dumping operations. The barges to be used are the Triton and GAF #1, normally towed by the tug W. F. Fredeman, Jr. The Triton is usually at Bolivar Roads prior to departure; the GAF #1 is usually at the GAF dock in Moses Lake, Texas City, Texas.

PHYSICAL AND CHEMICAL DESCRIPTION OF MATERIAL TO BE DUMPED

The waste is a completely water soluble mixture of salts as listed below and disperses in sea water completely. It contains no free or suspended oils or solids. Its characteristics are:

Sodium Chloride and Sodium Sulfate	2 - 10 wt %
2,5-dichlorobenzoic acid Na salt	0.04 - 0.2 wt %
2,5-dichloro-6-nitrobenzoic acid Na salt	0.3 - 6 wt %
3,4-dichloro-6-nitrobenzoic acid Na salt	0.1 - 0.7 wt %
2,3-dichloro-6-nitrobenzoic acid Na salt	0.1 - 0.7 wt %
2,4-dichloro-4-nitrobenzoic acid Na salt	0.2 - 0.8 wt %
2,5-dichloro-3-nitrobenzoic acid Na salt	0.06 - 0.3 wt %
Other salts such as sodium nitrate	Trace
Specific Gravity	1.05 - 1.15
TOC	13,000 - 30,000 mg/l
COD	30,000 - 80,000 mg/l
pH	7-12
Total Residue	9-15 wt %

The last four parameters are provided in compliance with Special Provision No. 9 of the Permit dated May 18, 1973. Also, as required by Special Condition No. 7 of the same Permit, and previously provided in our letters dated June 19, 1973, and July 17, 1973, the waste was analyzed for the specified metals with the following results:

Arsenic	Below detectable limit (<0.02 ppm)
Beryllium	Below detectable limit (<0.05 ppm)
Cadmium	Below detectable limit (<0.002 ppm)
Chromium, total	0.29 - 1.8 ppm
Lead	0.04 - 0.2 ppm
Manganese	0.1 - 0.9 ppm
Mercury	<0.0002 - 0.002 ppm
Nickel	0.29 - 1.5 ppm
Selenium	0.007 - 0.008 ppm
Vanadium	Below detectable limit (<0.1 ppm)
Zinc	0.13 - 0.85 ppm

None of these metals or their salts are used in the manufacturing process for Amiben. They apparently come from trace contamination of raw materials and of the incoming well and surface water supply.

Industrial Biology Laboratories, Philadelphia, has determined that a 36% solution has an acute oral toxicity of 2.5 gm/kg. Hazleton Laboratories, Falls Church, Virginia, determined that the 96-hour 50% lethal concentration is, on a 100% basis, >10,000 ppb for goldfish, >10,000 ppb for bluegill sunfish and >100,000 ppb for rainbow trout; 50% mortality was not reached. It was found to be ineffective at 10 ppm against duckweed, *Salvinia*, *Elodea* and algae. Toxicity to saltwater flora and fauna is covered in the study by Ibert et. al., of Oceanonics, Inc., that was appended to our initial application dated April 20, 1973. Note that the dilute sulfuric acid mentioned in that report is not a subject of this application.

Additional bioassay work has been undertaken by Texas A&M University. On July 3 their staff began laboratory studies to determine the 96-hour TLM values for selected marine organisms. Upon completion of the test work, the results of these bioassays will be made available to the EPA.

QUANTITY OF MATERIAL TO BE DUMPED

The quantity to be dumped is not more than 18,000 tons per month at not more than 4500 tons per trip and of a frequency of not more than 5 trips per month. If a smaller barge with less than 2500 ton capacity is used, the trips per month shall not exceed 10.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

PERMIT

Permit No. 730D007B - Interim

Name of Permittee GAF Corporation

Effective Date April 15, 1974

Expiration Date December 31, 1974

MARINE PROTECTION, RESEARCH AND
SANCTUARIES ACT (OCEAN DUMPING) PERMIT

In reference to the following application:

Application Number: 730D007B

for a permit authorizing the transportation and dumping of any material in compliance with the provisions of the Act of Congress enacted October 23, 1972, entitled The Marine Protection, Research and Sanctuaries Act of 1972, (hereinafter referred to as the Act),

GAF Corporation,

hereinafter called permittee, is authorized to transport material for dumping from its facility at

P. O. Box 2141

Texas City, Texas 77590

and to dump to ocean waters, all in accordance with the following general and special conditions:

General Conditions

1. All transportation and dumping authorized herein shall be consistent with the terms and conditions of this permit.

2. a. Transportation to, and dumping at any location other than that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

b. Transportation and dumping of any material more frequently than or in excess of that identified and authorized by this permit, or dumping of material not authorized by this permit, shall constitute a violation of the terms and conditions of this permit.

c. Permittee shall comply with each and every condition, provision and limitation in this permit and compliance with one or more but less than all conditions, provisions and limitations shall not constitute a ground or grounds of defense in any proceeding against permittee for violation of one or more of such conditions, provisions or limitations.

3. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. Violation of any term or condition of this permit;

b. Misrepresentation, inaccuracy or failure by the applicant to disclose all relevant facts in the permit application.

c. A change in any condition or material fact upon which this permit is based that requires either a temporary or permanent reduction or elimination of the authorized transportation or dumping including, but not limited to, changes in conditions at the designated dumping site, and newly discovered scientific data relative to the granting of this permit.

d. A determination by the Regional Administrator that the permitted dumping has resulted, is resulting or may result in imminent and substantial harm to human health or welfare or the marine environment.

e. Failure to keep the records and/or to notify appropriate officials of dumping activities.

4. The permittee shall allow the Regional Administrator and/or the U.S. Coast Guard, and/or their authorized representatives, upon the presentation of credentials:

a. To enter into, upon, or through the permittee's premises, vessels or other premises or vessels under the control of permittee, where, or in which, a source of material to be dumped is located or in which any records are required to be kept under the terms and conditions of this permit or the Act;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit or the Act;

c. To inspect any monitoring equipment or monitoring method required in this permit; or,

d. To sample any materials discharged or to be discharged.

5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private or public property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

6. This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities, or except as authorized by this permit, the undertaking of any work in any navigable waters.

7. Within 48 hours of the completion of each barging operation, permittee shall forward by depositing in the United States mail to the Regional Administrator a report which shall be verified in accordance with the provisions of 18 U.S.C. 1001, by a responsible officer or employee of Permittee, which report shall contain as a minimum, the following:

a. The total amount of material dumped and the amounts, in parts per million and poundage, of each constituent listed in Special Condition No. 1. The content of the constituent shall be verified by an analysis of the material to be dumped which shall be performed prior to such dumping operation. Records of such analyses shall be included with such report.

b. A statement of the local time at which each barging operation was commenced, the latitude and longitude of the place where each barging operation was commenced, and the time and the latitude and longitude of the place where each barging operation ceased, as well as the latitude and longitude of the mid point of the course made good if such barging operation extended over a period of six hours.

c. The time, date and point of actual departure and return for each barging operation.

d. Fathometer records of the entire run during which barging operations or dumping operations were taking place.

e. A negative report of a cancelled or changed dump, if, for any reason, a numbered barge trip for which notice is required by General Condition No. 8, is not made or the timing is changed.

8. Permittee shall notify by telegram the U.S. Coast Guard (local Captain of the Port) and the Regional Administrator not later than 12 hours prior to the departure from permittee's facility of any tug or vessel which is to depart to sea for a barging operation. Included in such notification shall be:

a. A sequential numbering system for the barge trips authorized by this permit. All communications relative to each barge trip shall reflect the number designated.

b. A statement of the amount, in tons, of materials to be dumped.

c. A chemical description, as determined by chemical analysis, of the constituents listed in Special Condition No. 1, excepting the metals.

d. The names and registry numbers of the tug and barge scheduled for departure.

e. The estimated time of arrival at the dump site and the estimated time of return to port and the port of return.

Such notice shall be received by the Regional Administrator 12 hours in advance of departure or at such time greater than 12 hours to allow receipt by the Regional Administrator during normal working hours. If permittee anticipates a weekend or holiday dump, he shall notify the Regional Administrator the working day prior to the weekend or holiday and a duty official will be assigned by EPA for receiving the report. In the event the metals analysis exhibits concentrations in violation of the limitations of this permit, permittee shall cause the master of the vessel to not discharge and return to port.

9. The permittee shall maintain complete records, which shall be available for inspection and copying by the Administrator, the Regional Administrator, or their designees, of:

a. The nature, including a complete description of relevant physical characteristics of material dumped pursuant to the permit.

b. The precise times and locations of dumping.

c. Any information relevant to the assessment of the impact of permitted dumping activities on the marine environment or human health or welfare.

10. The permittee shall, at the end of each six-month period, beginning on April 15, 1974, make a report to the Regional Administrator of the following information:

a. Information in the records to be kept pursuant to Paragraph 9 of the General Conditions.

b. A summary of the reports required by Paragraph 7 of the General Conditions.

c. Any additional records or reports required in the Special Conditions of this permit.

d. An analysis of all elements listed in 227.31(b)(1) of the ocean dumping final regulations and criteria (40 C.F.R. 227.31), excluding those reported under Special Condition 1.a. of herein permit, from a composite sampling from each barging operation.

11. The permittee shall make an additional report in accordance with the requirements of Paragraph 10 of the General Conditions at the expiration of this permit.

12. Reports required by Paragraphs 10 and 11 of the General Conditions shall be received by the Regional Administrator within 30 days following the end of the required reporting period.

13. If the dumping of material which is regulated by this permit is dumped due to emergency to safeguard life at sea in locations or in a manner not in accordance with the terms of this permit, the permittee shall make a full report in accordance with the provision of 18 U.S.C. 1001, within 30 days to the Regional Administrator of the emergency and the actions taken.

14. The reporting requirements contained in this permit are in addition to any reporting requirements of any other State or Federal Agency.

15. In the event any portion of the authorized dumping or transporting is done by a person, firm or corporation other than the named permittee, any and all reports required hereunder shall be jointly executed by both permittee and such other person, firm or corporation in accordance with the provisions of 18 U.S.C. 1001 by an officer or employee of such other person, firm or corporation.

16. The performance of any transportation or dumping authorized by this permit, by any person, firm or corporation other than the named permittee shall not relieve permittee from full responsibility for compliance herewith, nor shall the issuance of this permit to permittee relieve such other person, firm or corporation from responsibility for compliance herewith, nor shall the existence of any such contractual or other relationship between permittee and any other such person, firm or corporation operate to relieve either party from responsibility for compliance with this permit or the Act or both.

17. Terms used in this permit which are defined in Section 3 of the Act shall have the same meaning herein.

Special Conditions

1. Description of Material

In accordance with all other terms and conditions of this permit, the permittee is authorized to transport for dumping and to dump in ocean waters, material which shall not exceed in its physical and chemical characteristics the concentrations and loads listed below.

a. <u>Composition Constituents</u>	<u>Concentrations (wt/wt) Not to Exceed</u>
Sodium Chloride/Sulfate	80,990ppm
2,5-dichlorobenzoic acid (Na Salt)	1,400ppm
2,5-dichloro-6-Nitrobenzoic acid (Na Salt)	42,500ppm
3,4-dichloro-6-Nitrobenzoic acid (Na Salt)	5,500ppm
2,3-dichloro-6-Nitrobenzoic acid (Na Salt)	5,400ppm
2,5-dichloro-4-Nitrobenzoic acid (Na Salt)	6,800ppm
2,5-dichloro-3-Nitrobenzoic acid (Na Salt)	6,800ppm
<u>Metals</u>	
Mercury	0.002ppm
Cadmium	0.002ppm

b. Physical/Chemical Properties

pH	range 7 - 12
Total Residue	150,000ppm
TOC	30,000ppm
Specific Gravity	range 1.05 - 1.15

c. The character of the material being dumped shall not be altered in its content from the foregoing by the addition of waste-waters from sources other than those identified in the application or otherwise.

2. Amount of Material

a. The permittee is authorized to transport and dump material described in Paragraph 1 an amount not in excess of 153,000 tons under this permit.

b. The permittee is authorized to transport and dump in accordance with the following limitations:

Allowable tons per quarter: 54,000

Allowable tons per month: 23,400

A quarter will consist of three months and the first quarter will start with April 1, 1974; April will be allocated a waste load of 16,700 tons.

c. No trip shall be in excess of 4800 tons.

3. Transportation and Barging Activities

a. The port of departure for the dumping of the material described herein is Texas City, Texas, or such other port or terminal being used for storage of the accumulated waste subject to the provisions of General Condition No. 8. The permittee is authorized to transport the material described herein from his facility to such port of departure to ocean waters.

b. During loading operations, there shall be no loss of material to any waterway.

c. The permittee is authorized to dump the prescribed wastes in an approved dumping site which is defined in longitude and latitude as follows:

- (1) 27 degrees 12 minutes north latitude
- (2) 27 degrees 28 minutes north latitude
- (3) 94 degrees 28 minutes west longitude
- (4) 94 degrees 44 minutes west longitude

d. Permittee shall navigate around, by a radius of 15 nautical miles, the coral reefs found at the following coordinates:

W. Flower Garden: 27 degrees 53 minutes north latitude
93 degrees 48 minutes west longitude

E. Flower Garden: 27 degrees 55 minutes north latitude
93 degrees 36 minutes west longitude

Permittee shall also navigate around, by a radius of 5 nautical miles, the reefs found at the following coordinates:

Stetson Bank: 28 degrees 10 minutes north latitude
94 degrees 18 minutes west longitude

Claypile Bank: 28 degrees 20 minutes north latitude
94 degrees 09 minutes west longitude

e. The permittee shall regulate the dumping rate so that the material described in Special Condition 1, above, shall be discharged from a barge hereinafter identified at a rate not to exceed 7000 pounds per minute, while moving at a speed of not less than 5 knots.

f. The permittee shall discharge through an underwater dispersion nozzle.

4. Means of Transportation

a. The means of transportation shall be one of the following named vessels:

<u>Company</u>	<u>Barge</u>	<u>Capacity</u>
Port Arthur Towing Company	GAF #1	1,800 Tons
Port Arthur Towing Company	Triton	4,800 Tons

b. The permittee shall place this permit or a copy of this permit in a conspicuous place in the vessel which will be used for the transportation or dumping herein authorized.

5. Feasibility Study Required

No later than October 1, 1974, permittee shall conclude and present to Region VI an engineering feasibility study summarizing the applicability of surface treatment methods to Amiben waste streams. The study should include, but is not limited to, examination of the following treatment methods:

- a. Activated carbon adsorption
- b. Chemical treatment (oxidation, reduction, chemical precipitation, etc.)
- c. Biological methods of degradation of either streams resulting from (b) above or the raw waste itself
- d. Incineration
- e. Combinations of the above

The study shall designate the most practicable alternative to ocean disposal other than injection well disposal, or alternatively permittee's inability to handle wastes by means other than ocean disposal. Designation of the most practicable alternative should be substantiated by the submission of economic, chemical, physical, biological and engineering data generated during the examination of all alternatives.

The study shall further assess the shortest times in which the major alternatives could be implemented, with full details as to the basis used for arriving at such assessments.

6. Studies

a. Additional bioassays on representative endemic species shall be initiated to determine if any long-term chronic effects occur which are not apparent in short-term lethal dose bioassays. Such tests should include, but not be limited to, (1) subjecting the organisms to the initial dose expected in the waste stream with the dose being diluted with time to 0.01 of the 96 hr. TL_m, and then holding the organisms for at least 30 days after exposure, (2) pulse-dosing organisms by periodically repeating studies outlined in (1) but with a frequency of 7 days, and (3) measurement of the body burdens of as many waste constituents as possible from organisms studied in (1) and (2). Besides monitoring

mortality and bioaccumulation, these bioassays should also be monitored for any impairment of behavior including locomotion, feeding and reproduction. Among other species, the larvae of brown shrimp should be used in all but the reproductive bioassays.

b. Bioaccumulation and biomagnification studies shall be conducted to supplement bioaccumulation studies outlined in (1) above. Transfer of waste shall be measured in two simple marine food chains; seawater medium; phytoplankton; menhaden; seawater medium; phytoplankton; shrimp larvae. Several species of phytoplankton shall be employed and body burdens measured on all appropriate waste constituents.

c. Biodegradation: Studies shall be conducted to determine the biodegradability of the barged waste material in the marine ecosystem. Organisms indigenous to the Gulf of Mexico shall be used in these studies, which shall be conducted both for chemical and biological information.

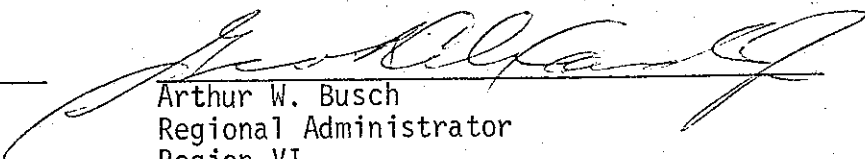
d. Permittee shall submit monthly progress reports including any interim suggestion that adverse effects occur besides those heretofore furnished EPA in connection with the application for this permit.

7. Operation Procedures

Permittee shall, by installation of accessory equipment or operation procedure, activate the pumps on the waste barge only after it is underway at 5 knots.

APR 15 1974

Date


Arthur W. Busch
Regional Administrator
Region VI

ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

May 18, 1973

OFFICE OF THE
REGIONAL ADMINISTRATOR

Mr. F. E. Wetherill
Plant Manager
GAF Corporation
P. O. Box 2141
Texas City, Texas 77590

Dear Mr. Wetherill:

Your application, as amended, for a permit to dump in ocean waters has been the subject of a final determination by this office following proper Public Notice and a Public Hearing held on May 3, 1973, and findings and recommendations.

By and through my authority under P.L. 92-532 and the regulations found at 40 C.F.R. 220.4, I hereby issue your facility a permit for ocean dumping, such permit being attached hereto and being numbered Permit Number 730D007.

In accordance with your letter of May 4, 1973, we understand that it will be your intention to obtain the use of additional properly equipped barges for your ocean disposal activities. In such event, please notify this office immediately of your intention to use such additional barge facilities and include the name of the owner of the barge or barges and the name and capacity of each additional barge.

In response to several factors raised in your letter of May 4, 1973, I hereby offer the following comments:

1. Special Condition No. 8 authorizes you to dump at a rate of 20,000 pounds per minute until June 1, 1973 and any testing at rates greater than 7,000 pounds per minute must be done prior to June 1, 1973.

2. The advance analysis required by General Condition No. 8 shall be included in the 24-hour notice and shall, as stated in the permit, be a chemical analysis of the waste to be barged.


3. In any case where bad weather or equipment malfunction causes a non-dump or a partial dump, such case will be handled individually as it arises with relation to the number of trips authorized under Special Condition 2.b.

4. For the purpose of discharging the accumulated material at the Port Arthur, Texas, facility, the port of departure for only that material so accumulated may be Port Arthur, Texas. In the 24-hour notice required by General Condition No. 8, you must include exactly where the barge and tug will depart from and its path to the Gulf. This information shall also be included in the 24-hour notice to the local captain of the port, U. S. Coast Guard.

5. The basis for Special Condition 3.d is for added protection of the area marine organisms. More specifically, the limit to daylight dumping is based on the vertical migration habits of the plankton in the area.

This permit has an expiration date of November 1, 1973. In the event your company decides to continue ocean disposal beyond the expiration date, your renewal application will be subject to the full requirements for processing contained in the Regulations at 40 C.F.R. 222.

Sincerely,

A handwritten signature in cursive script, appearing to read "Arthur W. Busch".

Arthur W. Busch
Regional Administrator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

PERMIT

Permit No. 730D007

Name of Permittee GAF Corporation

Effective Date May 18, 1973

Expiration Date November 1, 1973

MARINE PROTECTION, RESEARCH AND
SANCTUARIES ACT (OCEAN DUMPING) PERMIT

In reference to the following application:

Application Number: 730D007

for a permit authorizing the transportation and dumping of any material in compliance with the provisions of the Act of Congress enacted October 23, 1972, entitled The Marine Protection, Research and Sanctuaries Act of 1972, (hereinafter referred to as the Act),

GAF Corporation,

hereinafter called permittee, is authorized to transport material for dumping from its facility at

P. O. Box 2141

Texas City, Texas 77590

and to dump to ocean waters, all in accordance with the following general and special conditions:

General Conditions

1. All transportation and dumping authorized herein shall be consistent with the terms and conditions of this permit.

2. a. Transportation to, and dumping at any location other than that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

b. Transportation and dumping of any material more frequently than or in excess of that identified and authorized by this permit, or dumping of material not authorized by this permit, shall constitute a violation of the terms and conditions of this permit.

c. Permittee shall comply with each and every condition, provision and limitation in this permit and compliance with one or more but less than all conditions, provisions and limitations shall not constitute a ground or grounds of defense in any proceeding against permittee for violation of one or more of such conditions, provisions or limitations.

3. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. Violation of any term or condition of this permit;

b. Misrepresentation, inaccuracy or failure by the applicant to disclose all relevant facts in the permit application.

c. A change in any condition or material fact upon which this permit is based that requires either a temporary or permanent reduction or elimination of the authorized transportation or dumping including, but not limited to, changes in conditions at the designated dumping site, and newly discovered scientific data relative to the granting of this permit.

d. A determination by the Regional Administrator that the permitted dumping has resulted, is resulting or may result in imminent and substantial harm to human health or welfare or the marine environment.

e. Failure to keep the records and/or to notify appropriate officials of dumping activities.

4. The permittee shall allow the Regional Administrator and/or the U. S. Coast Guard, and/or their authorized representatives, upon the presentation of credentials;

a. To enter into, upon, or through the permittee's premises, vessels or other premises or vessels under the control of permittee, where, or in which, a source of material to be dumped is located or in which any records are required to be kept under the terms and conditions of this permit or the Act;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit or the Act;

c. To inspect any monitoring equipment or monitoring method required in this permit; or,

d. To sample any materials discharged or to be discharged.

5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private or public property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

6. This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or, except as authorized by this permit, the undertaking of any work in any navigable waters.

7. Within 48 hours of the completion of each barging operation, permittee shall forward by depositing in the United States mail to the Regional Administrator a report which shall be verified in accordance with the provisions of 18 U.S.C. 1001, by a responsible officer or employee of Permittee, which report shall contain as a minimum, the following:

a. The total amount of material dumped and the amounts, in percent and poundage, of each constituent thereof. The content of the constituent shall be verified by an analysis of the material dumped which shall be performed prior to such dumping operation. Records of such analyses, when requested by the Regional Administrator, shall be included with such report.

b. A statement of the Greenwich mean time at which each barging operation was commenced, the latitude and longitude of the place where each barging operation was commenced, and the Greenwich mean time and the latitude and longitude of the place where each barging operation ceased, as well as the latitude and longitude of the mid point of the course made good if such barging operation extended over a period of six hours.

c. Fathometer records of the entire run during which barging operations or dumping operations were taking place shall be submitted.

8. Permittee shall notify by telegram the U. S. Coast Guard (local Captain of the Port) and the Regional Administrator not later than 24 hours prior to the departure from permittee's facility of any tug or vessel which is to depart to sea for a barging operation. Included in such notification shall be a statement of the amount of materials to be dumped and all constituents thereof as determined by chemical analysis.

9. The permittee shall maintain complete records, which shall be available for inspection and copying by the Administrator, the Regional Administrator, or their designees, of:

a. The nature, including a complete description of relevant physical characteristics of material dumped pursuant to the permit.

b. The precise times and locations of dumping.

c. Any information relevant to the assessment of the impact of permitted dumping activities on the marine environment or human health or welfare.

10. The permittee shall, at the end of each six month period, beginning with the date of this permit, make a report to the Regional Administrator of the following information:

a. Information in the records to be kept pursuant to Paragraph 9 of the General Conditions,

b. A summary of the 48 hour reports required by Paragraph 7 of the General Conditions, and

c. Any additional records or reports required in the Special Conditions of this permit.

11. The permittee shall make an additional report in accordance with the requirements of Paragraph 10 of the General Conditions at the expiration of this permit, unless renewed.

12. Reports required by Paragraphs 10 and 11 of the General Conditions shall be received by the Regional Administrator within 30 days following the end of the required reporting period.

13. If the dumping of material which is regulated by this permit is dumped due to emergency to safeguard life at sea in locations or in a manner not in accordance with the terms of this permit, the permittee shall make a full report in accordance with the provisions of 18 U.S.C. 1001, within 30 days to the Regional Administrator of the emergency and the actions taken.

14. The reporting requirements contained in this permit are in addition to any reporting requirements of any other State or Federal Agency.

15. In the event any portion of the authorized dumping or transporting is done by a person, firm or corporation other than the named permittee, any and all reports required hereunder shall be jointly executed by both permittee and such other person, firm or corporation in accordance with the provisions of 18 U.S.C. 1001 by an officer or employee of such other person, firm or corporation.

16. The performance of any transportation or dumping authorized by this permit, by any person, firm or corporation other than the named permittee shall not relieve permittee from full responsibility for compliance herewith, nor shall the issuance of this permit to permittee relieve such other person, firm or corporation from responsibility for compliance herewith, nor shall the existence of any such contractual or other relationship between permittee and any other such person, firm or corporation operate to relieve either party from responsibility for compliance with this permit or the Act or both.

17. Terms used in this permit which are defined in Section 3 of the Act shall have the same meaning herein.

18. The applicant shall submit, within 90 days of the effective date of this permit, to the Regional Administrator and the appropriate Captain of the Port, U. S. Coast Guard, a Spill Prevention, Containment and Countermeasure Plan for any spillage or total loss of the material while loading or transporting through the territorial sea.

Special Conditions

1. Description of Material

In accordance with all other terms and conditions of this permit, the permittee is authorized to transport for dumping and to dump in ocean waters, material which shall not exceed in its physical and chemical characteristics the concentrations and loads listed below, and which shall not include material in addition to, or in excess of, the amounts specified on the application dated April 12, 1973, as amended April 20, 1973.

a. <u>Composition Constituents</u>	<u>Concentrations or Percentage (wt/wt) Not to Exceed</u>
Sodium Chloride/Sulfate	10.0%
2,5-dichlorobenzoic acid (Na Salt)	0.2%
2,5-dichloro-6-Nitrobenzoic acid (Na Salt)	6.0%
3,4-dichloro-6-Nitrobenzoic acid (Na Salt)	0.7%
2,3-dichloro-6-Nitrobenzoic acid (Na Salt)	0.7%
2,5-dichloro-4-Nitrobenzoic acid (Na Salt)	0.8%
2,5-dichloro-3-Nitrobenzoic acid (Na Salt)	0.3%

Metals*

b. Physical/Chemical Properties

Specific Gravity Range	1.05-1.15
Other**	

* See Special Condition No. 7

** See Special Condition No. 9

c. The character of the material being dumped shall not be altered in its content from the foregoing by the addition of wastewaters from sources other than those identified in the application or otherwise.

2. Amount of Material

a. The permittee is authorized to transport and dump material described in Paragraph 1 an amount not in excess of 18,000 tons per month. (tons or barrels)

b. Such transportation and dumping shall not be in excess of 4,800 tons per trip and at a frequency not to exceed 4 (tons or barrels) trips per month. If a smaller barge with less than 2,500 ton capacity is used, the trips per month shall not exceed 10.

3. Transportation and Barging Activities

a. The port of departure for the dumping of the material described herein is Texas City, Texas. The permittee is authorized to transport the material described herein from his facility to such port of departure to ocean waters.

b. During loading operations, there shall be no loss of material to any waterway.

c. The permittee is authorized to dump the prescribed wastes in an approved dumping site which is defined in longitude and latitude as follows:

1. 27 degrees 28 minutes north latitude
2. 27 degrees 44 minutes north latitude
3. 94 degrees 28 minutes west longitude
4. 94 degrees 44 minutes west longitude

d. Permittee shall commence dumping operations (the actual discharge of material authorized to be dumped by this permit) no earlier than 1/2 hours after sunrise and shall cease dumping operations not later than 1/2 hours prior to sunset on any day in which dumping operations take place.

e. The permittee shall regulate the dumping rate so that the material described in Special Condition 1, above, shall be discharged from a barge hereinafter identified at a rate not to exceed 7,000 lbs per minute, while moving at a speed of not less than (pounds or barrels) 5 knots.

f. In any case where the wastes are containerized, the permittee shall establish and use a system of identification for each container such that at any time later such container can be identified as specific wastes from the permittee's facility.

4. Means of Transportation

a. The means of transportation shall be one of the following named vessels:

<u>Company</u>	<u>Barge</u>	<u>Capacity</u>
Port Arthur Towing Company	PATCO-100	4,800 tons
Port Arthur Towing Company	GAF #1	1,800 tons

b. The permittee shall place this permit or a copy of this permit in a conspicuous place in the vessel which will be used for the transportation or dumping herein authorized.

5. Implementation Schedules

Permittee shall submit, within ninety (90) days of the issuance of this permit, an implementation schedule, containing an enforceable sequence of actions or operations leading to (1) the elimination of ocean dumping of all the wastes referred to in the application and (2) the treatment of such waste and disposition thereof in a manner consistent with a permit issued by the Regional Administrator pursuant to Title IV of the Federal Water Pollution Control Act Amendments of 1972.

6. Studies

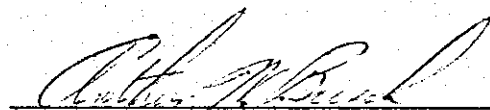
a. The permittee shall immediately initiate studies to determine the effects, both short-term and long-term, of his dumping activities.

b. Such studies shall include, as a minimum, the following:

1. Bioassays of this waste and its effect on marine organisms.
2. In-situ dispersion characteristics of the waste being dumped, in terms of the most efficient rates of discharge resulting in most minimal effects on marine ecology.
3. In-situ data on the bioaccumulation of the wastes, leading to an understanding of the persistence, if any, in the food web.
4. The studies required by b.1 and b.2 above shall be submitted within 90 days of the effective date of this permit. Data required by b.3 above shall be submitted as soon as practical, but not later than 180 days from the effective date of this permit.
7. The applicant shall analyze the wastes for metal content, using not less than two 24-hour composite samples. Such analyses shall be transmitted to the Regional Administrator within 30 days from the effective date of this permit. If metals are found in the wastes, this permit may be modified, limited or otherwise changed in accordance with Paragraph 3 of the General Conditions. Analyses shall be run on the following metals, as a minimum: mercury, cadmium, arsenic, lead, zinc, selenium, vanadium, beryllium, chromium, manganese and nickel.
8. Special Condition 3.e, insofar as it refers to the discharge rate, shall not apply until June 1, 1973. Prior to June 1, 1973, the permittee is authorized to discharge at a rate of 20,000 pounds per minute at a speed of not less than 5 knots.
9. In addition to any other analyses required in this permit, the permittee shall analyze and provide a more complete description of the waste material. Such analysis shall include identification and concentration of other salts, other unknowns, and the properties of TOC, pH, COD and total residue. The analysis shall be provided within 90 days of the effective date of this permit to the Regional Administrator.

MAY 18 1973

Date



Arthur W. Busch
Regional Administrator, Region VI



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

PERMIT

Permit No. 730D007A

Name of Permittee GAF Corporation

Effective Date July 31, 1973

Expiration Date November 1, 1973

MARINE PROTECTION, RESEARCH AND
SANCTUARIES ACT (OCEAN DUMPING) PERMIT

In reference to the following application:

Application Number: 730D007A

for a permit authorizing the transportation and dumping of any material in compliance with the provisions of the Act of Congress enacted October 23, 1972, entitled The Marine Protection, Research and Sanctuaries Act of 1972, (hereinafter referred to as the Act),

GAF Corporation,

hereinafter called permittee, is authorized to transport material for dumping from its facility at

P. O. Box 2141

Texas City, Texas 77590

and to dump to ocean waters, all in accordance with the following general and special conditions:

General Conditions

1. All transportation and dumping authorized herein shall be consistent with the terms and conditions of this permit.

2. a. Transportation to, and dumping at any location other than that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

b. Transportation and dumping of any material more frequently than or in excess of that identified and authorized by this permit, or dumping of material not authorized by this permit, shall constitute a violation of the terms and conditions of this permit.

c. Permittee shall comply with each and every condition, provision and limitation in this permit and compliance with one or more but less than all conditions, provisions and limitations shall not constitute a ground or grounds of defense in any proceeding against permittee for violation of one or more of such conditions, provisions or limitations.

3. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. Violation of any term or condition of this permit;

b. Misrepresentation, inaccuracy or failure by the applicant to disclose all relevant facts in the permit application.

c. A change in any condition or material fact upon which this permit is based that requires either a temporary or permanent reduction or elimination of the authorized transportation or dumping including, but not limited to, changes in conditions at the designated dumping site, and newly discovered scientific data relative to the granting of this permit.

d. A determination by the Regional Administrator that the permitted dumping has resulted, is resulting or may result in imminent and substantial harm to human health or welfare or the marine environment.

e. Failure to keep the records and/or to notify appropriate officials of dumping activities.

4. The permittee shall allow the Regional Administrator and/or the U. S. Coast Guard, and/or their authorized representatives, upon the presentation of credentials;

- a. To enter into, upon, or through the permittee's premises, vessels or other premises or vessels under the control of permittee, where, or in which, a source of material to be dumped is located or in which any records are required to be kept under the terms and conditions of this permit or the Act;
 - b. To have access to and copy any records required to be kept under the terms and conditions of this permit or the Act;
 - c. To inspect any monitoring equipment or monitoring method required in this permit; or,
 - d. To sample any materials discharged or to be discharged.
5. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private or public property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
6. This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or, except as authorized by this permit, the undertaking of any work in any navigable waters.
7. Within 48 hours of the completion of each barging operation, permittee shall forward by depositing in the United States mail to the Regional Administrator a report which shall be verified in accordance with the provisions of 18 U.S.C. 1001, by a responsible officer or employee of Permittee, which report shall contain as a minimum, the following:
- a. The total amount of material dumped and the amounts, in percent and poundage, of each constituent thereof. The content of the constituent shall be verified by an analysis of the material dumped which shall be performed prior to such dumping operation. Records of such analyses, when requested by the Regional Administrator, shall be included with such report.
 - b. A statement of the Greenwich mean time at which each barging operation was commenced, the latitude and longitude of the place where each barging operation was commenced, and the Greenwich mean time and the latitude and longitude of the place where each barging operation ceased, as well as the latitude and longitude of the mid point of the course made good if such barging operation extended over a period of six hours.

c. Fathometer records of the entire run during which barging operations or dumping operations were taking place shall be submitted.

8. Permittee shall notify by telegram the U. S. Coast Guard (local Captain of the Port) and the Regional Administrator not later than 24 hours prior to the departure from permittee's facility of any tug or vessel which is to depart to sea for a barging operation. Included in such notification shall be a statement of the amount of materials to be dumped and all constituents thereof as determined by chemical analysis.

9. The permittee shall maintain complete records, which shall be available for inspection and copying by the Administrator, the Regional Administrator, or their designees, of:

a. The nature, including a complete description of relevant physical characteristics of material dumped pursuant to the permit.

b. The precise times and locations of dumping.

c. Any information relevant to the assessment of the impact of permitted dumping activities on the marine environment or human health or welfare.

10. The permittee shall, at the end of each six month period, beginning with the date of this permit, make a report to the Regional Administrator of the following information:

a. Information in the records to be kept pursuant to Paragraph 9 of the General Conditions,

b. A summary of the 48 hour reports required by Paragraph 7 of the General Conditions, and

c. Any additional records or reports required in the Special Conditions of this permit.

11. The permittee shall make an additional report in accordance with the requirements of Paragraph 10 of the General Conditions at the expiration of this permit, unless renewed.

12. Reports required by Paragraphs 10 and 11 of the General Conditions shall be received by the Regional Administrator within 30 days following the end of the required reporting period.

13. If the dumping of material which is regulated by this permit is dumped due to emergency to safeguard life at sea in locations or in a manner not in accordance with the terms of this permit, the permittee shall make a full report in accordance with the provisions of 18 U.S.C. 1001, within 30 days to the Regional Administrator of the emergency and the actions taken.

14. The reporting requirements contained in this permit are in addition to any reporting requirements of any other State or Federal Agency.

15. In the event any portion of the authorized dumping or transporting is done by a person, firm or corporation other than the named permittee, any and all reports required hereunder shall be jointly executed by both permittee and such other person, firm or corporation in accordance with the provisions of 18 U.S.C. 1001 by an officer or employee of such other person, firm or corporation.

16. The performance of any transportation or dumping authorized by this permit, by any person, firm or corporation other than the named permittee shall not relieve permittee from full responsibility for compliance herewith, nor shall the issuance of this permit to permittee relieve such other person, firm or corporation from responsibility for compliance herewith, nor shall the existence of any such contractual or other relationship between permittee and any other such person, firm or corporation operate to relieve either party from responsibility for compliance with this permit or the Act or both.

17. Terms used in this permit which are defined in Section 3 of the Act shall have the same meaning herein.

18. The applicant shall submit, within 90 days of the effective date of this permit, to the Regional Administrator and the appropriate Captain of the Port, U. S. Coast Guard, a Spill Prevention, Containment and Countermeasure Plan for any spillage or total loss of the material while loading or transporting through the territorial sea.

Special Conditions

1. Description of Material

In accordance with all other terms and conditions of this permit, the permittee is authorized to transport for dumping and to dump in ocean waters, material which shall not exceed in its physical and chemical characteristics the concentrations and loads listed below, and which shall not include material in addition to, or in excess of, the amounts specified on the application dated April 12, 1973, as amended April 20, 1973.

a. <u>Composition</u> <u>Constituents</u>	<u>Concentrations or</u> <u>Percentage (wt/wt)</u> <u>Not to Exceed</u>
Sodium Chloride/Sulfate	10.0%
2,5-dichlorobenzoic acid (Na Salt)	0.2%
2,5-dichloro-6-Nitrobenzoic acid (Na Salt)	6.0%
3,4-dichloro-6-Nitrobenzoic acid (Na Salt)	0.7%
2,3-dichloro-6-Nitrobenzoic acid (Na Salt)	0.7%
2,5-dichloro-4-Nitrobenzoic acid (Na Salt)	0.8%
2,5-dichloro-3-Nitrobenzoic acid (Na Salt)	0.3%

Metals*

b. Physical/Chemical Properties

Specific Gravity Range	1.05-1.15
Other**	

* See Special Condition No. 7

** See Special Condition No. 9

c. The character of the material being dumped shall not be altered in its content from the foregoing by the addition of wastewaters from sources other than those identified in the application or otherwise.

2. Amount of Material

a. The permittee is authorized to transport and dump material described in Paragraph 1 an amount not in excess of 18,000 tons per month. (tons or barrels)

b. Such transportation and dumping shall not be in excess of 4,800 tons per trip and at a frequency not to exceed 4 (tons or barrels) trips per month. If a smaller barge with less than 2,500 ton capacity is used, the trips per month shall not exceed 10.

3. Transportation and Barging Activities

a. The port of departure for the dumping of the material described herein is Texas City, Texas. The permittee is authorized to transport the material described herein from his facility to such port of departure to ocean waters.

b. During loading operations, there shall be no loss of material to any waterway.

c. The permittee is authorized to dump the prescribed wastes in an approved dumping site which is defined in longitude and latitude as follows:

1. 27 degrees 28 minutes north latitude
2. 27 degrees 44 minutes north latitude
3. 94 degrees 28 minutes west longitude
4. 94 degrees 44 minutes west longitude

d. Permittee shall commence dumping operations (the actual discharge of material authorized to be dumped by this permit) no earlier than 1/2 hours after sunrise and shall cease dumping operations not later than 1/2 hours prior to sunset on any day in which dumping operations take place.

e. The permittee shall regulate the dumping rate so that the material described in Special Condition 1, above, shall be discharged from a barge hereinafter identified at a rate not to exceed 7,000 lbs per minute, while moving at a speed of not less than (pounds or barrels) 5 knots.

f. In any case where the wastes are containerized, the permittee shall establish and use a system of identification for each container such that at any time later such container can be identified as specific wastes from the permittee's facility.

4. Means of Transportation

a. The means of transportation shall be one of the following named vessels:

<u>Company</u>	<u>Barge</u>	<u>Capacity</u>
Port Arthur Towing Company	PATCO-100	4,800 tons
Port Arthur Towing Company	GAF #1	1,800 tons
Port Arthur Towing Company	Triton	5,000 tons

b. The permittee shall place this permit or a copy of this permit in a conspicuous place in the vessel which will be used for the transportation or dumping herein authorized.

5. Implementation Schedules

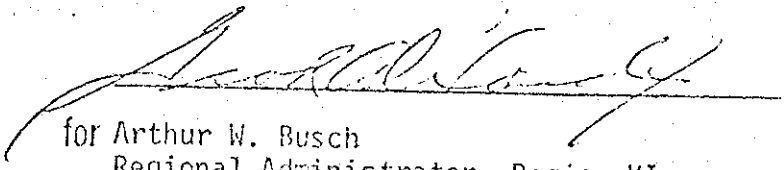
Permittee shall submit, within ninety (90) days of the issuance of this permit, an implementation schedule, containing an enforceable sequence of actions or operations leading to (1) the elimination of ocean dumping of all the wastes referred to in the application and (2) the treatment of such waste and disposition thereof in a manner consistent with a permit issued by the Regional Administrator pursuant to Title IV of the Federal Water Pollution Control Act Amendments of 1972.

6. Studies

- a. The permittee shall immediately initiate studies to determine the effects, both short-term and long-term, of his dumping activities.
- b. Such studies shall include, as a minimum, the following:
 1. Bioassays of this waste and its effect on marine organisms.
 2. In-situ dispersion characteristics of the waste being dumped, in terms of the most efficient rates of discharge resulting in most minimal effects on marine ecology.
 3. In-situ data on the bioaccumulation of the wastes, leading to an understanding of the persistence, if any, in the food web.
 4. The studies required by b.1 and b.2 above shall be submitted within 90 days of the effective date of this permit. Data required by b.3 above shall be submitted as soon as practical, but not later than 180 days from the effective date of this permit.
7. The applicant shall analyze the wastes for metal content, using not less than two 24-hour composite samples. Such analyses shall be transmitted to the Regional Administrator within 30 days from the effective date of this permit. If metals are found in the wastes, this permit may be modified, limited or otherwise changed in accordance with Paragraph 3 of the General Conditions. Analyses shall be run on the following metals, as a minimum: mercury, cadmium, arsenic, lead, zinc, selenium, vanadium, beryllium, chromium, manganese and nickel.
8. Special Condition 3.e, insofar as it refers to the discharge rate, shall not apply between July 30, 1973 and August 17, 1973. During that period, the permittee is authorized to discharge at a rate of 20,000 pounds per minute at a speed of not less than 5 knots.
9. In addition to any other analyses required in this permit, the permittee shall analyze and provide a more complete description of the waste material. Such analysis shall include identification and concentration of other salts, other unknowns, and the properties of TOC, pH, COD and total residue. The analysis shall be provided within 90 days of the effective date of this permit to the Regional Administrator.

JUL 30 1973

Date


for Arthur W. Busch
Regional Administrator, Region VI

ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

February 12, 1974

OFFICE OF THE
REGIONAL ADMINISTRATOR

Mr. F. E. Weatherill, Manager
GAF Corporation
P. O. Box 2141
Texas City, Texas 77590

Dear Mr. Weatherill:

This is to advise you that your current permit No.730D007A is hereby extended until April 15, 1974, under the authority of the regulations allowing expiration of an existing permit no later than April 15, 1974 and the Regional Administrators authority found at 40 C.F.R.220.4(a).

This letter also serves to modify several conditions of permit No.730D007A. The extension and modifications are effective February 13, 1974. The modifications are as follows:

1. Special Condition No.3.d. is deleted in its entirety. There is no remaining restriction to only daylight dumping.
2. The dump site, described at Special Condition No.3.c. is hereby modified and bounded by the following coordinates:

27 degrees 12 minutes north latitude
27 degrees 28 minutes north latitude
94 degrees 28 minutes west longitude
94 degrees 44 minutes west longitude
3. New Special Condition 3.g. and 3.h. are hereby added:

g. Permittee shall, by operational procedure, activate the pumps on the waste barge only after underway at a speed of not less than 5 knots.


h. Permittee shall discharge his wastes from an underwater dispersion nozzle.

The above modifications shall become a part of Permit No.730D007A and a copy hereof shall be placed aboard any vessel used for ocean disposal.

You should be aware that some studies aimed at long-term and chronic effects and impacts are being placed on permits issued under the final regulations. Your organohalogen wastes may also be subject to such chronic effect studies.

There has not yet been a final determination on your application for a special permit pursuant to P.L. 92-532. My staff will be in contact with you very soon in order to conduct further discussions of your waste streams.

Sincerely yours,



Arthur W. Busch
Regional Administrator

cc: Mr. W. Conrad
Baker and Botts
One Shell Plaza
Houston, Texas 77002

Captain of the Port
U. S. Coast Guard
Galveston, Texas 77550